

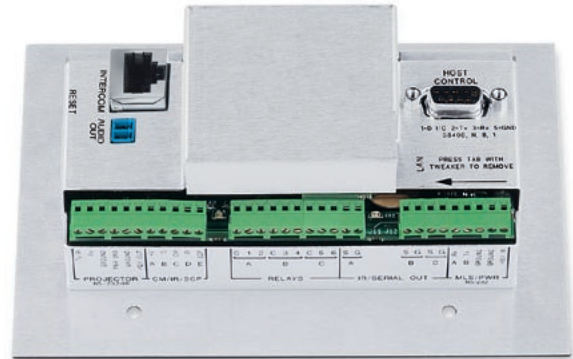


MLC 226 IP Series

Enhanced MLC - MediaLink™ Controllers with IP Link®



MLC 226 IP front view



MLC 226 IP rear view

COMMON FEATURES

- **Two bidirectional RS-232 ports for universal display control and MLS - MediaLink Switcher control** — The MLC 226 IP has a dedicated port for communicating with virtually any projector or flat panel display via IR or RS-232. Control drivers can be downloaded or created using the intuitive software. A second RS-232 port is for controlling an optional Extron MLS - MediaLink Switcher.
- **IP Link® Ethernet monitoring and control** — An IP integration technology developed by Extron specifically engineered to meet the needs of professional A/V environments that enables the MLC 226 IP to be controlled and proactively monitored over a LAN, WAN, or the Internet.
- **NEW Supports optional IP Intercom module to provide two-way, half-duplex voice communications over an IP network**
- **Discrete ON and OFF display power controls** — Simplify system operations and eliminate the need for an external display remote.
- **Three IR/serial ports for one-way control of external devices**
- **Six configurable relays for control of room functions** — Enables control of lighting, screen settings, and other device functions.
- **IR learning for customized control of external sources such as VCRs and DVD players when used with optional IRCM - Infrared Control Modules**
- **Configurable buttons** — Can be set up to trigger a variety of functions such as selecting an input, sending a serial or IR command, or controlling a relay.
- **Macro capability** — Any button can be configured to execute multiple actions through the serial and IR control ports. For instance, the touch of a single button could trigger commands to turn on the display, select the display's RGB input, and select an input on the MLS - MediaLink Switcher.
- **Tri-color, backlit, easy-to-label buttons** — Can be customized for each installation and provide easy operation for presenters in low-light environments.
- **Inactivity timer for display shutoff** — Preserves energy, prevents plasma burn-in, or extends projector lamp life.
- **Front panel security lockout** — When the security lockout mode is engaged, the MLC 226 IP's front panel becomes inoperable unless a user-defined PIN number is entered. No functions of the controller or IR remote can be activated.
- **Volume control with volume indication for display or MLS - MediaLink Switcher** — Allows for convenient, centralized control without additional remotes. The five LEDs provide clear indication of the current audio setting.

- **Optional SCP 226 Secondary Control Panel** — Duplicates the MLC 226 IP's front panel buttons and offers a second access point within a room.
- **NEW 7.25 MB flash memory**
- **Optional IR 402 Remote** — Offers remote control of the MLC 226 IP and connected external sources
- **Mounting options** — There are a variety of optional mounting kits available for installing the MLC 226 IP virtually anywhere, including walls, lecterns, or tables.
- **External international power supply included**

DESCRIPTION

The Extron **MLC 226 IP** MediaLink Controllers are enhanced control panels for controlling A/V equipment in any small classroom or boardroom. They standardize the control interface for all systems, making display systems simple to use. Standardization also makes setup and maintenance easier to support. All MLC 226 IP models also include IP Link with GlobalViewer™, a free Web-based asset management and remote control software application.

The MLC 226 IP MediaLink Controller offers several enhanced control capabilities including six input selection buttons, two bidirectional serial ports for display and switcher control, three unidirectional serial/IR control ports, six relays, and support for optional IRCM - Infrared Control Modules to control VCRs, DVDs, and other IR controllable equipment.

The flexible MLC 226 IP acts as an extended remote control panel. It is not a switcher; instead, as a controller, it tells the display when to switch between its various inputs. Presenters with little or no training can walk into any multimedia classroom and operate the A/V system. The MLC 226 IP includes universal display control for a display's power, input switching, and volume control. The MLC 226 IP features backlit buttons that can be custom-labeled for easy identification. Because the buttons illuminate, they are helpful for presenters in low-light environments. The input selection and room/function buttons on the MLC 226 IP can be utilized for source selection and relays, as well as sending various RS-232 or IR commands.

Room Control

In addition to display and source control, the MLC 226 IP also offers the ability to control many other devices in the room. Room lighting, screens, projector lifts, window shades and other equipment can be controlled using the controller's six relays.

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MLC 226 IP Series

DESCRIPTION (CONTINUED)

IP Link® Ethernet Control

The MLC 226 IP is equipped with Extron's IP Link, an IP integration technology specifically engineered to meet the needs of professional A/V environments — from small K-12 classrooms to large universities and businesses. GlobalViewer™, a free Web-based asset management and remote control software application, is specifically designed to work with products that include IP Link technology. It facilitates key asset management functions including:

- **Proactive maintenance** — GlobalViewer can store and display information about connected devices like serial numbers, owner identification, maintenance history, and installed firmware versions. This centralized data can be collected and used to reduce maintenance costs and guide future purchasing decisions. For instance, a projector can be polled routinely to track lamp usage and total life time. When lamp usage reaches a predetermined number of hours, the MLC 226 IP can send a report via e-mail.
- **Event scheduling** — GlobalViewer uses the real-time clock and calendar in IP Link-enabled devices to maximum value. User-defined tasks are easy to configure and schedule with the GlobalViewer and don't require high-level programming skills. For instance, an administrator may want to turn off all projectors every Friday at close of business. The administrator can schedule the system to turn off all projectors at a specified time, and raise all projection screens that were left down.
- **Remote technical support** — Technicians can troubleshoot systems remotely because GlobalViewer provides the real-time status of connected devices. Information such as connection status, power state, and current input selection is displayed in a central location. For many connected devices, technicians can toggle power on or off, switch sources, control volume, and more without leaving their office. Many common problems can be resolved without a trip to where the equipment is located.
- **Theft alerts** — IP Link-enabled products are always on and routinely poll their attached devices for status information. If any serially controlled device such as a projector or plasma display is physically disconnected from the network, the MLC 226 IP monitoring its status will know immediately. In such an event, it can send an e-mail message notifying security personnel of the possible theft. For fast action, e-mails can be sent to multiple addresses including cell phones and wireless PDAs.

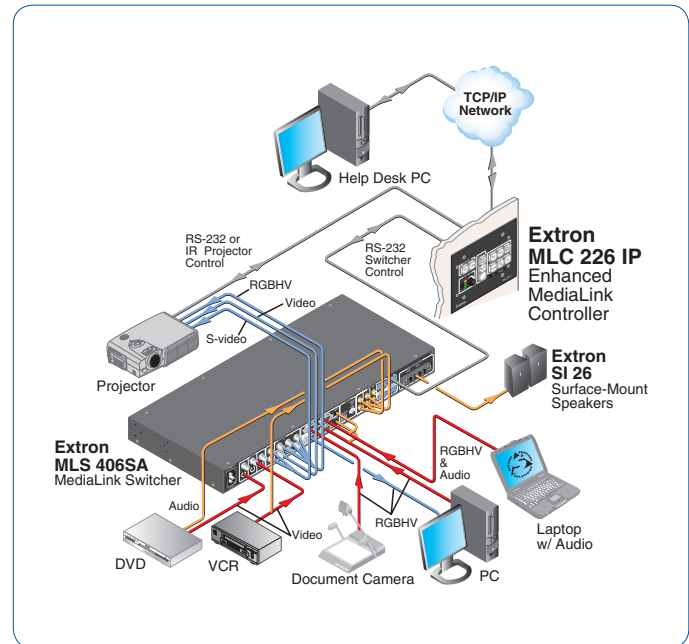
Easy System Configuration using Global Configurator Software

The MLC 226 IP is designed to be configured with Extron's Global Configurator. With Global Configurator, the MLC 226 IP can be configured with a wide selection of commonly used display control drivers. These RS-232 or IR drivers are essential for the MLC 226 IP to effectively communicate with a display device. They enable the MLC 226 IP to control basic display functions such as power, input selection, and volume adjustment. Users can create their own drivers or go to the Extron Web site to download RS-232 or IR drivers compatible with the latest and most popular display devices. Global Configurator also adds support for GlobalViewer, a free Web-based asset management and remote control software application specifically designed to work with products that include IP Link technology.

The MLC 226 IP is designed to work with almost every Extron switcher, including the MLS - MediaLink Switchers, which are specifically designed to complement MLC - MediaLink Controllers. MediaLink Switchers are available to accommodate a variety of video, RGBHV, and audio signals while providing unique features that expand A/V system capabilities. The MLC 226 IP can also work as a stand-alone device to control a display without the aid of a switcher.

Mounting Options

The MLC 226 IP Controllers are offered in various sizes to accommodate numerous architecturally compatible possibilities. The **MLC 226 IP** is available without a faceplate. It also ships with a three-gang wall plate. The **MLC 226 IP AAP** ships with a five-gang faceplate and includes an opening to accommodate four single space AAP - Architectural Adapter Plates. The **MLC 226 IP L** utilizes a low profile lectern mounting kit that fits into a compact space on a lectern, wall, or the Extron UCM RAAP and UCM 10X8P Universal Controller Mounting Kits.



MLC 226 IP

Enhanced MLC - MediaLink™ Controller with IP Link®

UNIQUE FEATURES

- Three-gang faceplate
- Includes MR 300 three-gang mud ring
- Available in black, white, or RAL9010 white



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP	Black.....	60-600-02
MLC 226 IP	White.....	60-600-03
MLC 226 IP	RAL9010 White.....	60-600-05

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MLC 226 IP Series

MLC 226 IP DV+ **NEW**

MediaLink Controller with IP Link® and Integrated DVD and VCR IR Control

UNIQUE FEATURES

- Five-gang faceplate
- Dual-function DVD and VCR IR control
- Includes black and white five-gang, high-impact plastic mounting faceplates
- Includes black and white MR 500 five-gang mud rings



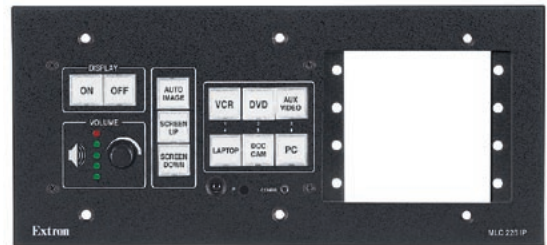
MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP DV+	Black & White	60-600-82

MLC 226 IP AAP

Enhanced MLC - MediaLink™ Controller with IP Link® and AAP Opening

UNIQUE FEATURES

- Five-gang faceplate
- Opening for up to four single space AAP - Architectural Adapter Plates — AAPs sold separately
- Includes MR 500 five-gang mud ring
- Available in black, white, or RAL9010 white



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP AAP	Black	60-600-12
MLC 226 IP AAP	White	60-600-13
MLC 226 IP AAP	RAL9010 White	60-600-15

MLC 226 IP L

Enhanced MLC - MediaLink™ Controller with IP Link® and Lectern Faceplate

UNIQUE FEATURES

- Low profile, 3.2" (8.1 cm) tall faceplate fits into a compact space on a lectern or desk
- Mounts in a rack or wall using an Extron UCM RAAP or UCM 10X8P Universal Controller Mounting Kit
- Available in black, white, or RAL9010 white



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP L	Black	60-600-32
MLC 226 IP L	White	60-600-33
MLC 226 IP L	RAL9010 White	60-600-35

MLC 226 IP

Enhanced MLC - MediaLink™ Controller with IP Link® - No Faceplate

UNIQUE FEATURES

- No faceplate for custom installations
- For use with any of the MLM 226 IP Series mounting options



MODEL	VERSION DESCRIPTION	PART #
MLC 226 IP	Controller Only - No Faceplate	60-600-00

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MLC 226 IP Series

MLC 226 IP Series Accessories

INCLUDED ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
100-240VAC, 50/60 Hz to 12VDC/1A - DC bare wire end	Extron Desktop Power Supply	page 634	70-055-01
NETXC M-M	Male to Male RJ-45 Network Crossover Cable, 6'	page 413	26-591-01
Backlit Button Labels	Text Button Labels	page 416	33-954-01
Backlit Button Labels	Icon Button Labels	page 416	33-955-01
OPTIONAL ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
UC50' (50' / 15 m)	Universal Projector Control Cable 50' (15.2 m)	page 414	26-518-01
IR Emitter and Shield Kit	IR Emitter Kits	page 412	70-283-01
MLC PW/RS-232/VC-35'	One Power, Switcher Communications and MPA Volume Control Cable - Plenum, 35' (10.6 m)	page 433	26-626-35
IRCM-DV+	Dual-Function DVD and VCR IR Control Module, Black	page 391	70-220-02
IPI 101 AAP	One-Button IP Intercom Module, Black	page 389	70-501-02
IPI 104 AAP	Four-Button IP Intercom Module, Black	page 389	70-502-02
MLS 406SA	Six Input MLS - MediaLink™ Switcher with Stereo Audio Amplifier	page 428	60-560-03
MLS 506SA	Six Input MLS - MediaLink™ Switcher with Stereo Audio Amplifier	page 431	60-386-04
CM-9BLB	Nine-Button, Four Space Control Module AAP, Black	page 394	70-494-02
SCP 226	SCP - Secondary Control Panel for MLC 226 IP, Black	page 399	60-671-02
IR 402	Handheld IR Remote Control for System 5 IP and MLC 226 IP	page 276	70-207-01
MLA-VC10	Volume Control Module	page 609	60-502-01
MLM 226 L	Replacement Lectern Mounting Kit for the MLC 226 IP L and SCP 226 L, Black ..	page 407	70-342-02
UCM RAAP	Universal Controller Mounting Rack Kit, Black	page 409	70-344-02
SMB Three-gang box	Three-Gang Surface Mounting Box, Black	page 763	60-641-02
MLM-WB+	Lockable Metal Wall Box with Flip-Down 4U Rack Space, Black	page 408	60-458-02

SPECIFICATIONS

IP INTERCOM

Connection type (IPI-MLC)	RJ-45 jack for CAT 5, CAT 5e, or CAT 6 cable
Audio	
Frequency response	20 Hz to 3.3 kHz, ± 1 dB
Audio processing	
Audio format	PCM, μ -law companded
Sampling rate	8 kHz
Sample size	16 bit, μ -law companded to 8 bit
Audio latency	Software: 30 ms through 160 ms Network: <150 ms, typical
Audio output	
Number / Type	1 mono (for use with an optional IP Intercom)
Line level output	-10 dBV (316 mVrms), unbalanced (via 3.5 mm captive screw connector, 2 pole)
Communication	
Transport bandwidth for IPI control and audio, half duplex	80 kbps (0.08% of 100Base-T)
Ethernet protocol	TCP/IP (control), UDP (audio)

CONTROL / REMOTE — MLC CONTROLLER HOST PORTS

Serial control port	2 RS-232: 1 rear panel 9-pin female D connector (shared with digital input), 1 front panel 2.5 mm mini stereo jack
Baud rate and protocol	38400, 8 data bits, 1 stop bit, no parity
Ethernet control port	1 RJ-45 female
Ethernet data rate for network communication	10/100Base-T, half/full duplex with autotdetect
Ethernet protocol	ARP, DHCP, ICMP (ping), TCP/IP, Telnet, HTTP, SMTP
Ethernet default settings	Link speed and duplex level = autotdetect IP address = 192.168.254.254, subnet mask = 255.255.0.0, default gateway = 0.0.0.0 DHCP = off
Web server	Up to 200 simultaneous sessions 7.25 MB nonvolatile user memory
Secondary Control Panel (SCP)	(1) 3.5 mm 5-pole direct insertion captive screw connector (shared with control module and IR Link port)
IR remote control	IR 402 (optional) Front panel: 30° maximum, 40 degrees off axis Rear panel: 38 kHz, hardwired, modulated
Program control	Extron's configuration program for Windows® Extron's Simple Instruction Set (SIS™) Microsoft® Internet Explorer, Telnet

CONTROL — RELAY

Number / Type	6 momentary or latching (configurable via software)
Connectors	(3) 3.5 mm captive screw connectors, 3 pole
Connector configuration	Groups A, B, C; each with 1 common and 2 normally open relays (default)
Contact rating	24 V, 1 A

CONTROL — PROJECTOR / PLASMA

Projector control port	(1) 3.5 mm direct insertion captive screw connector, 3 pole
Programmable for RS-232 control	(± 5 V) or TTL level (0 to 5 V) infrared control up to 1 MHz
Baud rate and protocol (RS-232)	115200 to 300 (9600 default) baud (configurable); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity

CONTROL — SWITCHER

Switcher control port	(1) 3.5 mm direct insertion captive screw connector, 3 pole, for RS-232 control (± 5 V)
Baud rate and protocol	9600 baud; 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity

CONTROL — PERIPHERAL EQUIPMENT

IR / Serial control ports	(3) 3.5 mm direct insertion captive screw connectors, 2 pole Programmable: RS-232 (± 5 V) control, or TTL level (0 to 5 V) infrared control up to 1 MHz
Baud rate and protocol	115200 to 300 (9600 default) baud (configurable); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), or even or odd parity
IR learning frequencies	30 kHz to 62 kHz
IR learning distance	2" (5.1 cm) to 12" (30.5 cm) from the front panel

DIGITAL INPUT CONTROL

Number / Type	2 digital
Connector	1 rear panel 9-pin female D connector (shared with the MLC controller host port) (1) 3.5 mm direct insertion captive screw connector (shared with power sense port)
Input voltage range	0-12 VDC
Input impedance	28k ohms
Programmable pullup	2k ohms to +3.3 VDC
Threshold low to high	>1.2 VDC
Threshold high to low	<1.1 VDC

GENERAL

External power supply	100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, 1 A, regulated
Power input requirements	
MLC 226 IP DV+	12 VDC, 0.515 A (includes MLC 226 IP and IRCM-DV+)
All other models	12 VDC, 0.495 A (0.515 A with 1 IRCM-DV+ connected)
NOTE: An MLC 226 Series controller must be powered by its own power supply. It cannot be powered by an MLS switcher.	
Rack mount	
MLC 226 IP DV+	No, but wall- and furniture-mountable
All other models	Yes, with optional rack mounting kits, and also wall- and furniture-mountable with optional mounting kits
Enclosure type	
MLC 226 IP DV+	High-impact plastic
All other models	Metal
Enclosure dimensions	
Faceplate	
MLC 226	4.5" H x 6.4" W x 0.1" D (11.4 cm H x 16.3 cm W x 0.3 cm D) (3 gang)
MLC 226 AAP	
MLC 226 IP DV+	4.5" H x 10.1" W x 0.1" D (11.4 cm H x 25.7 cm W x 0.3 cm D) (5 gang)
MLC 226 L	3.2" H x 6.5" W x 0.1" D (8.1 cm H x 16.5 cm W x 0.3 cm D)
Device	
MLC 226 IP DV+	2.75" H x 5.3" W x 2.0" D (7.0 cm H x 13.5 cm W x 5.9 cm D) and 2.7" H x 2.6" W x 0.9" D (6.9 cm H x 6.6 cm W x 2.3 cm D) (Depth excludes knob and buttons. Fits some 5 gang boxes. Allow at least 2.1" (5.3 cm) depth in the wall/furniture.)
All other models	2.75" H x 5.3" W x 2.0" D (7.0 cm H x 13.5 cm W x 5.9 cm D) (Depth excludes knob and buttons. Fits some 3 gang boxes)
Product weight	
MLC 226 IP DV+	2.1 lbs (1.0 kg)
All other models	1.9 lbs (0.9 kg)
Shipping weight	6 lbs (3 kg)